### 2.2 Angles Formed by Parallel Lines

## Learning Targets (Day 2):

1) Using the known angle properties to solve for unknown angles in a diagram.
2) Providing reasons or justifications for the angle measures we find.

- In assessing these types of problems, providing a valid reason or justification will be worth as many marks as determining the correct answer.
- The reason or justification must include reference to the appropriate angle pair classification that allows you to use a mathematical relationship.
- When multiple angles are to be found, you may find them in any order, but you should always list them in the order you find them.
- Once an angle measure has been determined, it can then be used to find other angles.


## Example \#1:

Determine the measures of $\mathbf{a}, \mathbf{b}, \mathbf{c}$ and $\mathbf{d}$ and give justifications.

$a=$ $\qquad$ Reason: $\qquad$
$\qquad$ Reason: $\qquad$
$\qquad$ Reason: $\qquad$
$d=$ $\qquad$ Reason: $\qquad$

## Example \#2:

Determine the measures of $\mathbf{a}, \mathbf{b}, \mathbf{c}, \mathbf{d}, \mathbf{e}$ and $\mathbf{f}$ and give justifications.

$\qquad$ Reason: $\qquad$
$\qquad$ Reason: $\qquad$
$c=$ $\qquad$
Reason: $\qquad$
$\qquad$ Reason: $\qquad$
$\qquad$ Reason: $\qquad$
$f=$ $\qquad$
Reason: $\qquad$

## Example \#3:

Determine the values of $\mathbf{x}, \mathbf{y}$, and $\mathbf{z}$. Show calculations and give justifications.


## Example \#4:

Solve for x . Give justifications and show calculations.


## Example \#5:

Solve for $x$. Give justifications and show calculations.


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